

Wed Apr 01 12:35:21 EDT 2020
"Hope, Brian" <Hope.Brian@epa.gov>
FW: Letter from Reverse Ionizer to EPA Administrator Wheeler
To: "CMS.OEX" <cms.oex@epa.gov>

From: Eades, Cassaundra <Eades.Cassaundra@epa.gov>
Sent: Wednesday, April 1, 2020 12:22 PM
To: Hope, Brian <Hope.Brian@epa.gov>
Cc: Richardson, RobinH <Richardson.RobinH@epa.gov>; Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Subject: FW: Letter from Reverse Ionizer to EPA Administrator Wheeler

From: Kaiser, Sven-Erik <Kaiser.Sven-Erik@epa.gov>
Sent: Wednesday, April 1, 2020 12:11 PM
To: Eades, Cassaundra <Eades.Cassaundra@epa.gov>; Mims, Kathy <Mims.Kathy@epa.gov>; Klasen, Matthew <Klasen.Matthew@epa.gov>; Borum, Denis <Borum.Denis@epa.gov>; Matthews, Demond <matthews.demond@epa.gov>; Williams, Thea <Williams.Thea@epa.gov>
Subject: Letter from Reverse Ionizer to EPA Administrator Wheeler

Sandy and Kathy – please forward the attached letter to OEX for logging in as an AX. We recommend controlling to OW with a cc to ORD. Although the request came from Sen. Inhofe, the letter itself is from the company to Administrator Wheeler, so the response should be addressed back to the company. Thanks and please let me know if any questions. Best,

Sven

Sven-Erik Kaiser

U.S. EPA

Office of Congressional and Intergovernmental Relations

1200 Pennsylvania Ave., NW (1305A)

Washington, DC 20460

202-566-2753 (o)

202-591-0619 (c)

From: Hinch, Jake (Inhofe) <Jake_Hinch@inhofe.senate.gov>
Sent: Friday, March 27, 2020 9:46 AM
To: Frye, Tony (Robert) <frye.robert@epa.gov>
Subject: Letter from Constituent

Hey Tony,

We had a constituent who asked for this letter be passed on to the Administrator. Can you pass this on? Thanks!

Jake Hinch

Legislative Assistant

U.S. Senator James M. Inhofe

205 Russell Senate Office Building

Washington, D.C. 20510

(202)224-4721



March 20, 2020

Mr. Andrew Wheeler, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Administrator Wheeler:

Our company has developed a breakthrough technology that combines two proven water treatment methods with advanced non-thermal plasma. Our system effectively mitigates pathogens (Legionella and other bacteria, viruses and parasites) in cooling tower water systems, which EPA's R&D director reported can spread through their evaporative drift.

Results from the world-renowned BioVir Laboratories (conducted by Dr. Richard Danielson) of the testing of our Reverse Ionizer™ Plasma Disinfection System (PDS), using M2 Phage virus, produced a 7.2 log reduction and was determined that if the virus is waterborne, our PDS has the opportunity to destroy any virus, including the COVID-19 – see attached results diagram.

We had a very productive meeting with EPA Office of Water director (D. Lee Forsgren) in December 2018, to present the 'continuous kill' mechanisms of our PDS, which in lab testing has shown it could provide the most effective solution for the water treatment community.

Earlier this week, our head engineer and I had a call with the two senior scientists at EPA and DHS, along with a senior EPA microbiologist charged with research to improve drinking water quality by studying environmental bacteria that grows in water systems. They informed us the EPA has begun its legal process to procure our PDS beta device for testing at the EPA's National R&D laboratory in Cincinnati, with a target beginning mid-summer to begin testing.

Sally Gutierrez has recommended forming a Public-Private-Partnership with us and the EPA. We would recommend including our partner, Becton Dickinson (BD, whose CEO was at the WH Rose Garden conference last Friday), and CBRE, who brought us a renowned water treatment expert in order to guide our proof-of-concept field trial at BD this summer at their HQ campus.

We also are seeking \$5M in funding through "emergency function support #8" or other source so that our final testing and initial PDS market deployment can be greatly accelerated.

Sincerely,

Patrick Hughes

Patrick Hughes
President & CEO

Proof-of-concept initial PDS test results from the BioVir Laboratory show:

Reverse Ionizer / BioVir Biological Contaminants Inactivation Test Results				
Test Date	Assay	Tested Contaminant	Measured Inactivation (%)	Inactivation Goal (%)
1/16/2017	Bacteria	Pseudomonas Putida (Legionella Surrogate)	99.6000%	99.9999%
1/17/2017	Bacteria	Pseudomonas Putida (Legionella Surrogate)	99.8930%	99.9999%
2/14/2017	Bacteria	Pseudomonas Putida (Legionella Surrogate)	99.99994%	99.9999%
12/6/2016	Virus	Bacteriophage MS2	99.995%	99.99%
1/30/2017	Virus	Bacteriophage MS2	99.999993%	99.99%
1/31/2017	Virus	Bacteriophage MS2	99.999974%	99.99%
6/19/2017	Parasite	Cryptosporidium Parvum Oocysts	99.525%	99.90%
7/31/2017	Bacteria	Escherichia Coli	99.999986%	99.9999%
8/14/2017	Bacteria	Escherichia Coli	99.999973%	99.9999%

RI's dual-cell **Plasma Disinfection System (PDS)** pilot units have been installed to begin pilot field testing in Becton Dickinson's physical plant in Franklin Lakes, NJ beginning in May 2020:



- **Jones Lang LaSalle (JLL)** is the asset/plant operations manager for BD's HQ facility. JLL has stated that they have dozens of major clients interested in pursuing RI's technology for commercial properties, that potentially can produce "hundreds of orders."
- **CBRE** brought RI to BD via a nationally recognized water treatment expert, Loraine Huchler. CBRE and JLL manage over 9 billion sq. ft. of commercial office space globally.
- **AECOM Management Services** has told us they want to install and maintain RI plasma systems in NYC skyscrapers built by AECOM Tishman Construction over the past several decades to which they already have most buildings' mechanical systems schematics.
- **NYC** is currently the only major urban market, with over 5,000 cooling towers, that has a 'mandated' cooling tower compliance program focused on controlling the spread of Legionella-contaminated cooling tower drift. We will seek to coordinate with NYC Mayor de Blasio and officials from the Department of Health and Mental Hygiene (responsible for cooling tower program) to tour BD and review RI's installed RI plasma technology later in 2020.
- **U.S. Environmental Protection Agency** in connection with the **Dept. of Homeland Security** are in the process of procuring their official order for one of RI's plasma pilots to test at the laboratory they share at the EPA's R&D facility in Cincinnati, Ohio.

Key Ownership Value Considerations:

- **Operational:** OpEx and CapEx savings in water, energy and chemical usage.
- **Impact Investing:** Public companies can significantly strengthen their ESG ratings.
- **Toxic Tort Liability:** Growth of In Vitro Diagnostic testing industry has enabled tracking of contaminated cooling tower drift to the point source of contamination. This has now led to significant growth of toxic tort claims. For example, 2017 alone over \$450MM in toxic tort claims were filed against hospitals and at least one major claim was filed against Walt Disney Co. by a girl sickened by the October 2017 outbreak at Disneyland in Anaheim that sickened over two dozen and killed two tourists.

Georgia's largest Legionella outbreak in state history occurred last summer (July 2019) at the Downtown Atlanta Sheraton, shutting the 800-room hotel down for an entire month.

Former acting U.S. Surgeon General has joined our board to help guide our technology rollout.



Dr. Kenneth Moritsugu